

Patent claims

1. A process for the catalysis of complex reactions of large molecules by means of enzymes bonded to a polymeric support, wherein the polymeric support material has no or almost no pores.
2. A process for the enzymatic obtainment of biomolecules, selected from the group consisting of peptides, proteins, oligosaccharides or polysaccharides, from their precursors by means of one or more enzymes bonded to a polymeric support, wherein the polymeric support material has no or almost no pores.
3. A process for the obtainment of insulins or their analogs from the corresponding precursors by means of one or more enzymes bonded to a polymeric support, wherein the polymeric support material has no or almost no pores.
4. The process as claimed in one of claims 1 to 3, wherein the polymeric support material is a copolymer of the monomers methacrylamide and N,N'-bis(methacrylamide).
5. The process as claimed in one or more of claims 1 to 4, wherein the polymeric support material has oxirane group-containing monomers.
6. The process as claimed in one or more of claims 3 to 5, wherein the enzyme is bonded covalently to the support material with the aid of oxirane groups.
7. The process as claimed in one or more of claims 3 to 6, wherein the enzyme is trypsin.
8. The process as claimed in one or more of claims 3 to 7, wherein the enzyme immobilized on the support has an activity of 0.05 to 0.5 U/ml.

9. The process as claimed in one or more of claims 3 to 8, wherein the pH of the reaction solution is 6 to 10.

10. The process as claimed in claim 9, wherein the pH is 7 to 9.

